

## CLAIMS

1. A method for improving a statistical message classifier, comprising:
  - testing a message with a machine classifier, wherein the machine classifier is capable of making a classification on the message;
  - 5 in the event the message is classifiable by the machine classifier, updating the statistical message classifier according to the classification made by the machine classifier.
2. A method for improving message classifier as recited in Claim 1, wherein the machine classifier is further capable of making no classification on the message.
- 10 3. A method for improving message classifier as recited in Claim 1, wherein the machine classifier is a reliable classifier.
4. A method for improving message classifier as recited in Claim 1, wherein the machine classifier is at least as reliable as the statistical message classifier.
5. A method for improving message classifier as recited in Claim 1, wherein the machine classifier includes a whitelist classifier.
- 15 6. A method for improving message classifier as recited in Claim 1, wherein the machine classifier includes a collaborative fingerprinting classifier.
7. A method for improving message classifier as recited in Claim 1, wherein the machine classifier includes an image analyzer.
- 20 8. A method for improving message classifier as recited in Claim 1, wherein the machine classifier includes a probe account.
9. A method for improving message classifier as recited in Claim 1, wherein the machine classifier includes a challenge-response classifier.
10. A method for improving message classifier as recited in Claim 1, wherein updating the statistical message classifier comprises updating a knowledge base used to train the statistical message classifier.
- 25 11. A method for improving message classifier as recited in Claim 1, wherein updating the statistical message classifier comprises updating a statistical model used by the statistical message classifier.

12. A method for improving message classifier as recited in Claim 1, wherein updating the statistical message classifier comprises parsing the message to obtain a feature.
13. A method for improving message classifier as recited in Claim 1, wherein 5 updating the statistical message classifier comprises parsing the message to obtain a feature and updating a counter corresponding to the feature.
14. A method for improving message classifier as recited in Claim 1, wherein updating the statistical message classifier comprises parsing the message to obtain a feature and updating a training set.
- 10 15. A method for improving message classifier as recited in Claim 1, wherein updating the statistical message classifier comprises parsing the message to obtain a feature and computing a spam probability associated with the feature.
16. A method for improving message classifier as recited in Claim 1, wherein updating the statistical message classifier comprises parsing the message to obtain a 15 feature and computing a score associated with the feature.
17. A method for improving message classifier as recited in Claim 1, wherein the message is a previously stored message.
18. A method for improving message classifier as recited in Claim 1, wherein the message is an incoming message.
- 20 19. A method for improving message classifier as recited in Claim 1, in the event that the message is not classifiable by the classifier, further comprising testing the message with another machine classifier.
- 25 20. A method for improving a statistical message classifier, comprising:
  - testing a message with a first classifier wherein the first classifier is capable of making a first classification;
  - in the event that the message is classifiable by the first classifier, updating the statistical message classifier according to the first classification;
  - in the event that the message is not classifiable by the first classifier, testing the message with a second classifier, wherein the second classifier is capable of making a second classification;
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in the event that the message is classifiable by the second classifier, updating the statistical message classifier according to the second classification.

21. A method for improving message classifier as recited in Claim 20, wherein the first classifier is a reliable classifier.

5 22. A method for improving message classifier as recited in Claim 20, wherein the second classifier is a reliable classifier.

23. A method for improving message classifier as recited in Claim 20, wherein the first classifier is a reliable good classifier.

24. A method for improving message classifier as recited in Claim 20, wherein the 10 first classifier is a reliable junk classifier.

25. A method for improving message classifier as recited in Claim 20, wherein the second classifier is a reliable good classifier.

26. A method for improving message classifier as recited in Claim 20, wherein the second classifier is a reliable junk classifier.

15 27. A method for improving message classifier as recited in Claim 20, wherein the first classifier is a user-augmented classifier.

28. A system for classifying a message, comprising:

20 a statistical message classifier; and

a machine classifier coupled to the statistical message classifier, configured to test the message;

wherein the machine classifier is capable of making a reliable classification, and in the event the message is classifiable by the machine classifier, the statistical message classifier is updated according to the reliable classification made by the machine classifier.

25 29. A system for improving a statistical message classifier, comprising:

a first classifier configured to test the message, capable of reliably making a first classification, and configured to update the statistical message classifier according to the first classification in the event that the message is classifiable by the first classifier; and

a second classifier coupled to the first classifier, capable of reliably making a second classification, and configured to further test the message in the event that the message is not classifiable by the first classifier.

30. A computer program product for improving a statistical message classifier, the  
5 computer program product being embodied in a computer readable medium and comprising computer instructions for:

testing a message with a machine classifier, wherein the machine classifier is capable of making a reliable classification;

10 in the event the message is classifiable by the machine classifier, updating the statistical message classifier according to the reliable classification made by the machine classifier.

31. A computer program product for improving a statistical message classifier, the computer program product being embodied in a computer readable medium and comprising computer instructions for:

15 testing a message with a first classifier wherein the first classifier is capable of reliably making a first classification;

in the event that the message is classifiable by the first classifier, updating the statistical message classifier according to the first classification;

20 in the event that the message is not classifiable by the first classifier, testing the message with a second classifier, wherein the second classifier is capable of reliably making a second classification;

in the event that the message is classifiable by the second classifier, updating the statistical message classifier according to the second classification.

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